ISD NEWS AND VIEWS

INFORMATION SERVICES DIVISION

JULY, 1986 VOL. 4 NO. 9

ADMINISTRATOR MIKE TREVOR

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SYSTEMS DEVELOPMENT BUREAU CHIEF JEFF BRANDT

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MAINFRAME SECTION

SAS TIPS

The SAS User's Group International (SUGI) annually votes on enhancements they would like incorporated into the system. As would be expected in a comprehensive system, many of the requests can be handled by the existing system but the technique may be hidden in the manual. The following are taken from an article in the 1986 SUGI Proceedings titled "If It Were a Snake, It would have Bit Ya, or ... 101 Things on the SASWARE Ballot You Can Already Do." Selected topics and suggested solutions will be mentioned here but for the complete article, see Gary in Room 24 of the Mitchell Building.

1. Direct access into a SAS dataset, use the POINT option on the SET Statement.

2. Print a list of error messages - Run PROC SASMSG.

3. Table look-up using Proc Format
    List comparisons using Proc Format
    Recoding formatted values using Proc Format

For more information on SAS, call Gary Wulf at 444-2555.

NEW IBM 3278/79 EMULATION ADAPTER

IBM has delivered its new Advanced 3278/79 Emulation Adapter card along with new software which works with either the old or new boards. Two versions of software are available which replace the old 3278/79 Emulation Control Program and the SNA Emulation and RJE Support Program:

1. IBM PC 3270 Emulation Program - Entry Level

2. IBM PC 3270 Emulation Program - Version 2

The Information Center is in the process of running the new board and software through the same file transfer tests performed for the May '86 News and Views article. Initial results indicate substantial improvements in both speed and cost of transfers. A complete set of test results will be printed in next month's News and Views. The Information Center is also in the process of testing these new software products with IBM's Personal Services/PC, and on the IBM Token-Ring Network.

If you have questions regarding these new products, contact the Information Center at 444-2973.

CICS NEWS AND TIPS

Access to CICS News and Tips specifically for CICS users and developers is available through "CICS News" facility as part of the standard CICS LOGON. To view this information, press the PF1 Key when the CICS LOGON screen is displayed. After viewing the news, the user will be returned to the LOGON screen so that they can complete their LOGON normally.

The update date is shown on the first page so that users can determine if any recent changes have been made. Instructions for use are also included on page 1.

In the future, we hope to expand this service to include sections on CICS standards and policies as well as current information on all related software products such as BMS/GT and Intertest. Any suggestions are welcome. Call Ron Armstrong at 444-2860.

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MICROCOMPUTER SECTION

OFFICE AUTOMATION STUDIES

Office automation studies are one of the services provided by
the Information Center. If you are interested in an office
automation study and need assistance, contact Pat Emineth at
444-2921.

MICROCOMPUTER TERM CONTRACT DELETION

The IBM 5218 printer and associated equipment have been
withdrawn from the IBM Microcomputer Term Contract. For an
updated term contract on diskette in either WordPerfect or
DisplayWrite format, contact Jeanette or Mel at 444-2858.

OFFICE OF PUBLIC INSTRUCTION ONLINE BULLETIN BOARD

The Office of Public Instruction has an online bulletin board
available for use by students, faculty and other interested
computer users. The system offers message exchanging between
OPI staff and other users of the system. Users of the system
can also access public domain software (free software that
isn't copy protected). For more information on this bulletin
board system, contact John Heinrich at 444-3489 or call the
bulletin board at 444-3481 and leave a message.

COMPUTER BASED TRAINING

The following computer based tutorials are available for use
in the Information Center's Computer Based Training (CBT)
Lab:
- Using Displaywrite 3
- Disk Operating System
- Macros and other advanced features of LOTUS 1-2-3
- Introduction to LOTUS 1-2-3

To sign up for CBT, contact Wendy Wheeler at 444-2856.

LOTUS 1-2-3 USER GROUP MEETING

The Lotus 1-2-3 user group will meet on July 28, 1986 in the
ISD Education Center (Room 25) in the Mitchell Building at
1:30 pm. Topics to be discussed include:

- Data Sensitivity Table Analysis
- Importing files
- Parse

Anyone interested in Lotus 1-2-3 is encouraged to attend.
Contact Sheila Morasko at 444-2974 for more information.

PC MENUS

When you turn on your computer, would you like to be presented with a menu of <u>your</u> most commonly used programs? For example, if you need to do some word processing, you select WordPerfect (let's assume it is number 2 in the menu) by typing a 2 and hitting enter. The computer then changes directories and starts WordPerfect for you. When you are done with WordPerfect, the original menu is redisplayed, ready for you to make another selection. Does this appeal to you?

Consider this: You are moving your furniture around in the office. You must run a special program to protect the hard disk from damage while moving the computer. Running the program "Preparing the Hard Disk for Moving" moves the read/write heads on the hard disk to an empty track where if the hard disk is bumped, it will not be damaged. This is easy since menu item number 3 is "Prepare the Hard Disk for Moving." You press 3 followed by enter, wait for the program to complete and turn off the power to the computer. Isn't that a lot easier than loading the diagnostic diskette and rebooting the system? In fact, if you accidentally use a PC-XT diskette to prepare the PC-AT hard disk for movement, you will <u>damage the hard disk</u> on the AT.

Developing a custom menu is easy. It is accomplished using batch files which are similar to TSO CLISTS on the mainframe computer. A simple menu might look like this:

```
Select One or Enter a DOS Command
---------------------------------
1.  WordPerfect
2.  Lotus 1-2-3
3.  Prepare Hard Disk for Moving
---------------------------------
C>
```

Notice the C> prompt. Even though a menu is offered, it need not be used. The user still has full control of the computer and can enter any DOS command or path name. The batch file for such a menu is:

```
echo off
cls
echo Select One or Enter a DOS Command
echo ---------------------------------
echo 1.  WordPerfect
echo 2.  Lotus 1-2-3
echo 3.  Prepare Hard Disk for Moving
echo ---------------------------------
```

and I call it MENU.BAT.

To use this menu, you will also need three other batch files: .BAT, 2.BAT, and 3.BAT. Since you do not have to put the .BAT extension on the file name when invoking a batch file, just typing the number 1 followed by enter will cause 1.BAT to run.

At this point, the contents of 1.BAT, 2.BAT, and 3.BAT would depend on your specific menu structure and system. These files must be in the same directory as MENU.BAT.

The menu system offers an elegant way to start your most used programs. For the infrequent user or those who move from computer to computer, it gives easy access without the need to remember directory and program names.

If you would be interested in a batch file programming class or if you need help in designing batch files, call Brett at 444-2044.

Maureen
Schmidt

Ellen
Feaver

ISD EMPLOYEE HONORED

Maureen Schmidt was recently awarded a 30 year pin from Ellen
Feaver, Director of the Department of Administration. Maureen
has been a Data Entry Operator for 30 years. Congratulations,
Maureen.

When Maureen first started with the State, data was keyed on
cards using an IBM 026 keypunch machine. Today, data is keyed
into an IBM 3760 machine. A job is then executed on the
mainframe computer that transfers this data to a tape or disk.
This data is then ready to be used by a particular job.

INCREASING YOUR COMPUTER VOCABULARY

BASIC
(Beginner's All-purpose Symbolic Instruction Code) - a common
algebra-like, high-level, timesharing computer language. It is
easily learned and used for problem solving by engineers,
scientists, and others who may not be professional programmers.
It is common on most computer systems.

Applications Software
Software used by both programmers and non-programmers.
Programmers use programs like COBOL and BASIC to write
application systems. Non-programmers use general purpose
software for specific purposes such as word processing
(WordPerfect on a micro), statistics (SAS on the mainframe),
and spreadsheets (LOTUS 1-2-3 on a micro).

Operating System Software
The various master control programs that combine to control the
use of the computer. Operating system software is normally
supplied by the computer manufacturer or specialized software
companies. Examples include DOS (Disk Operating System) on a
micro or MVS (Multiple Virtual Storage) on the mainframe
computer. The operating system controls the execution of all
other programs.

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TRAINING SCHEDULE

MAINFRAME COURSES

BASIC TERMINAL SKILLS (ISD12): presented by Wendy Wheeler of
                             the Information Center

DATE:	July 8, 1986
TIME:	8:30 a.m. to 4:00 p.m.
PLACE:	ISD Education Center, Room 14, Mitchell Building
COST:	$50.00
LIMIT:	8
PREREQUISITE:	3270nd (interactive class on terminal operation)
CANCELLATION DATE:	July 1, 1986

BASIC TERMINAL SKILLS is a hands-on workshop to provide
experience using computer terminals and the SPF editor. The
SPF editor is an easy-to-learn menu used to enter data and
programs into the State of Montana central computer system.
Entering data, changing data and submitting programs for
execution are covered in detail. Also covered are SPF's
utility functions and how to track job output.

This course is essential for state government personnel using
terminals tied into the State of Montana central computer.
This course is a prerequisite for many other ISD classes.

INTRODUCTION TO SAS (ISD32): presented by Gary Wulf of the
                            Information Center

DATE:	July 9 and 10, 1986
TIME:	8:30 to 4:30
PLACE:	Room 14, Mitchell Building
COST:	$100.00
LIMIT:	8
PREREQUISITE:	Basic Skills (ISD12) or equivalent.
CANCELLATION DATE:	July 2, 1986

Although SAS stands for Statistical Analysis System, it is a
very powerful general purpose tool for capturing, editing,
and reporting data. In just a few minutes, one can design
and program a full screen data entry application for a
terminal. Reports and statistical procedures can be coded to
summarize and print the information entered.

This course is intended to teach to basics of SAS as a
general tool. It does not attempt to teach statistics and
prior knowledge of statistics is not necessary.

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CULPRIT FOR PROGRAMMERS: presented by Randy Holm of the
Information Center

DATE:	September 3, 4, 5, and
	September 9, 10, 11 (6 days)
TIME:	8:30 am to 4:30 pm each day
PLACE:	Room 25, Mitchell Building
COST:	$250.00
LIMIT:	10
PREREQUISITE:	Programming experience, Basic
	Terminal Skills (SPF), JCL helpful
CANCELLATION DATE:	August 26, 1986

This class is designed for those with programming experience
who plan to generate reports from existing databases or
standard files. CULPRIT programming will be taught using
lecture, videos and programming exercises. Manuals will be
included.

ADS/A AND ADS/O PROGRAMMING: presented by DBMS, Inc.

DATE:	July 31 thru August 8, 1986
TIME:	8:30 am to 4:30 pm each day
PLACE:	Room 25, Mitchell Building
COST:	$250.00
LIMIT:	16
PREREQUISITE:	IDMS programming experience
CANCELLATION:	July 24, 1986

The ADS/A course will cover how to use ADS/A to create a
working prototype. ADS/A facilities will be explored with
emphasis on how they can aid application analysts and
developers throughout the application development cycle. The
ADS/O portion will cover the entire ADS/Online application
development cycle from preparation through generation to
implementation.

For more information on this class, contact Wendy Wheeler at
444-2856.

MICROCOMPUTER CLASSES

BEGINNING MICROCOMPUTER SKILLS (OA02): presented by the
staff of the Information Center

DATE:	August 11, 1986 or August 12, 1986
TIME:	8:15 a.m. to 4:30 p.m.
PLACE:	Room 25, Mitchell Building
COST:	$50.00
LIMIT:	10
PREREQUISITE:	None
CANCELLATION DATE:	August 4, 1986

This course will give participants brief hands-on experience
with microcomputers. Topics to be covered:

    The machine
    The operating system
    Word processing
    Spreadsheets and graphics
    File management
    Communications

All class time will be spent using microcomputers and
software. The participant will learn what microcomputers can
do and how to approach them with a positive attitude. This
course or its equivalent is a prerequisite for other
microcomputer courses.

FUNDAMENTALS OF DOS (OA03): presented by Sheila Morasko of
the Information Center

DATE:	August 20, 1986
TIME:	8:30 a.m. to 4:30 pm
PLACE:	ISD Education Center, Mitchell Building
COST:	$75.00
LIMIT:	10
PREREQUISITE:	Beginning Micro Skills and/or 3 months micro experience
CANCELLATION DATE:	August 14, 1986

FUNDAMENTALS OF DOS is intended for microcomputer users who
need to know more about controlling their microcomputer
through its operating system. This is an introductory course
and programming experience is NOT required.

Topics to be covered include:

  What is DOS? Why is it necessary to know about it?
  DOS names for peripherals
  File naming
  Special files like CONFIG.SYS
  Internal commands - DIR, ERASE, RENAME, TYPE, COPY and
      their variations
  External commands - FORMAT, SYS, DISKCOPY, CHKDSK, MODE
  How to interpret batch files
  Backup procedures

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WORD PROCESSING CLASSES

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INTRODUCTION TO WORDPERFECT (OA18): presented by Brett
                        McAllister of the Information Center

DATE:	August 18 and August 19, 1986
TIME:	8:30 am to 3:00 pm on August 18 and
	8:30 am to noon on August 19
PLACE:	Room 25, Mitchell Building
COST:	$75.00
LIMIT:	10
PREREQUISITE:	Beginning Microcomputer Skills (OA02)
CANCELLATION DATE:	August 11, 1986

This course is intended for anyone interested in learning the
basics of WordPerfect. This class will concentrate on text
creation, use of function keys, editing, formatting,
printing, filing, and retrieving documents. An advanced
class for WordPerfect is also available.

ADVANCED FEATURES OF WORDPERFECT (OA20): presented by Sheila
                        Morasko of the Information Center

DATE:	July 22 and 23, 1986
TIME:	8:30 a.m. to 3:00 p.m. on July 22
	8:30 a.m. to 12:00 noon on July 23
PLACE:	Room 25, Mitchell Building
COST:	$75.00
LIMIT:	10
PREREQUISITE:	Beginning Microcomputer Skills (OA02)
	and Introduction to WordPerfect (OA18)

CANCELLATION DATE:	July 15, 1986

For those already using WordPerfect, the advanced class will
cover headers, footers, footnotes, macro programming,
merging, page numbering and spelling checks.

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DISPLAYWRITE 3 - SPECIAL TOPICS (OA40): presented by Sheila
Morasko of the Information Center

DATE:	August 21, 1986
TIME:	9:00 a.m. to noon
PLACE:	Room 25, Mitchell Building
COST:	$25.00
LIMIT:	8
PREREQUISITE:	Beginning Microcomputer Skills (OA02)
CANCELLATION DATE:	August 14, 1986

This course is intended for those already using Displaywrite
3 on a microcomputer for word processing. The special topics
class is designed to present tips, shortcuts and advanced
features of the package. This class will cover Keystroke
Programming for reusing a series of keystrokes, and
Pagination. There will also be some time for answering
specific problem questions.

If possible, please bring your Displaywrite software with you
to class. This class is also available for those using
Displaywrite 2.

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LOTUS 1-2-3 CLASSES

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INTRODUCTION TO LOTUS 1-2-3 (OA12): presented by Wendy
Wheeler of the Information Center

DATE:	July 29 and 30, 1986 **(This date has changed!)** -or- August 13 and 14, 1986
TIME:	8:30 am to 3:30 pm on the first day 8:30 am to 12:00 noon on the second day
PLACE:	Room 25, Mitchell Building
COST:	$75.00
LIMIT:	10
PREREQUISITE:	Beginning Microcomputer Skills (OA02)
CANCELLATION DATE:	July 23, 1986 or August 6, 1986

This course is designed for anyone with little or no previous
1-2-3 or microcomputing experience.

INTRODUCTION TO LOTUS 1-2-3 will concentrate on 1-2-3
spreadsheet design and commands and the creation of
graphics. Printing spreadsheets and graphs is also covered.
The more advanced features such as macro programming and
database commands are covered in the advanced course.

Class format consists of lecture and hands-on practice
followed by lab time on actual agency spreadsheets for
further experience.

ADVANCED FEATURES OF LOTUS 1-2-3 (OA21): presented by Ron
                           Heilman of the Information Center

DATE:	August 26 and August 27, 1986
TIME:	8:30 am to 4:30 pm on August 26
	LAB 1: 8:30 am to 12 noon on August 26
	LAB 2: 1:00 pm to 4:30 pm on August 27
PLACE:	Room 25, Mitchell Building
COST:	$75.00
LIMIT:	10
PREREQUISITE:	Introduction to Lotus 1-2-3 and Beginning Microcomputer Skills
CANCELLATION DATE:	August 19, 1986

This course is designed for anyone who is using 1-2-3 for
basic spreadsheet work. Features not covered in the
introductory class will be included (ex: protection status,
range names, combining files, etc). Advanced features such
as macro programming, one and two-way sensitivity analysis
tables and database commands will be covered in detail.

Class consists of lecture, hands-on practice, lab work or
question and answer period if time permits.

SPREADSHEET DESIGN AND DOCUMENTATION (OA23): presented by
                           Ron Heilman of the Information
                           Center

DATE:	July 24, 1986
TIME:	8:30 am to 4:30 pm
PLACE:	Room 14, Mitchell Building
COST:	$50.00
LIMIT:	10
PREREQUISITE:	Introduction to Lotus 1-2-3 (OA02)
CANCELLATION DATE:	July 17, 1986

(Continued)

This class will emphasize the importance, effectiveness and
the organizational benefits of good spreadsheet design and
documentation. The Lotus 1-2-3 spreadsheet program will be
used to demonstrate good and bad techniques. Some methods to
track down common mistakes and logic problems will be
covered.

Students should have previous spreadsheet experience. A
general knowledge spreadsheet applications and concepts is
required. Minimum requirements can be met by completing the
"Introduction to Lotus 1-2-3" class. Students are not
required to be 1-2-3 users, however, if this is the case, or
if you are not sure if you meet the minimum requirements,
please call Ron at 444-2924.

MACRO PROGRAMMING WITH LOTUS 1-2-3: presented by Wendy
                           Wheeler of the Information Center

DATE:	August 15, 1986
TIME:	8:30 am to noon
PLACE:	ISD Education Center
COST:	$35.00
LIMIT:	10
PREREQUISITE:	Intro to Lotus (OA12) or equivalent experience
CANCELLATION DATE:	August 8, 1986

The macro programming capabilities of 1-2-3 can help you
automate 1-2-3 tasks, saving time and keystrokes. A macro is
a sequence of keystrokes and commands stored in your
worksheet for execution when desired. This class is for
1-2-3 uses who have no previous macro experience. Through
lecture, video and hands-on practice, participants will learn
to write and document timesaving macros.

ISD ENROLLMENT APPLICATION
(FOR ALL COURSES)

PLEASE COMPLETE THE FOLLOWING APPLICATION AND RETURN
TO INFORMATION SERVICES DIVISION

COURSE: _____

DATE: _____

STUDENT: _____

AGENCY/DIVISION: _____

MAILING ADDRESS: _____

_____

PHONE: _____

ISD BILLING NUMBER: _____

SOC SEC NO (FOR P/P/P): _____

AUTHORIZED SIGNATURE: _____

HAVE YOU MET THE PREREQUISITES FOR THIS COURSE? PLEASE
EXPLAIN GIVING JOB EXPERIENCE OR CLASS WHEN APPLICABLE

_____

_____

_____

PICA POINTS

About
Typesetting

question: *What is typesetting?*

answer: Typesetting owes it's origin to 11th century China, where in 1041-48 alchemist Pi Sheng conceived moveable (re-usable) type. In 1313 magistrate Wang Chen ordered 60,000 characters on wood blocks to be used for recording technology. By 1403 King Htai Tjong of Korea ordered 100,000 pieces of type cast of bronze — nine other fonts followed — two of them before typography was discovered in Europe by Gutenburg (c.1450).

Today, typesetting is accomplished thru the use of specialized computer software "front end systems" which are used for data entry and editing, and micro-processor based composition systems (typesetters) which form characters from stored mathematical data called digitized fonts. The text which is prepared for output to the typesetter by the front end system is passed electronically to the typesetter for output (composition).

Typesetting is . . .

. . . this page is typset, the remainder of <u>News & Views</u> is not.

Why Typeset?

A recent study conducted for Compugraphic Corporation at Boston University found that typeset messages are read 27 percent faster than typewritten or dot matrix material and there is no loss of comprehension. The study also found that readers respond to typeset messages more efficiently than with material presented in other formats.

Graphic arts professionals have long recognized that presentation can be as important as content in impact and memorability of a message. Over 50 typefaces are available at **publications & graphics** to illustrate ~~almost~~ most any message.

Typesetting saves paper and consequently reduces printing costs. The Manhattan Telephone Directory which can be carried in a briefcase, is a stack of paper over five feet tall when typed. Depending upon document size and complexity, generally, typesetting costs <u>may</u> be recovered if 1000 or more copies are to be printed.

publications & graphics division offers a wide range of typographic services. Call 444-3053 — ask for Typography *or* visit our shop located in 𝔶𝔢 𝔒𝔩𝔡𝔢 𝔏𝔦𝔮𝔲𝔬𝔲𝔯 𝔐𝔬𝔯𝔢𝔥𝔬𝔲𝔰𝔢 at 920 Front Street, Helena, MT 59620.

Typesetting Methods Available:

- hand entry
- asynchronous communication - from PC's, Display Writers, etc.
- bisynchronous communication - from state mainframe computer system - any device which can communicate with the mainframe can send documnts to publications & graphics for typesetting.
- magnetic tape - documents must be stored in ALTER on the mainframe system and be prepared for TIPE processing - ALTER & TIPE are particularly well suited for large documents which are published more than once.

What To Expect

Typesetting cost and turnaround time vary greatly. The following are some of the factors affecting cost and turnaround time:

- hand entry vs. telecommunication (async or bisync)
- hand written copy vs. typed copy
- vague job specifations vs. well defined job specifications
- material: text vs. tables
- size
- complexity

Typesetting by means of telecommunication is about three times more efficient than hand entry. Hand written copy is slower to work with than typed copy. Vague and or illegible job specifications increase costs because of the time required for the deciphering involved, and the costly re-runs that can result. Tabular information is much more time consuming than "straight" text.

Turnaround Time

Other factors affecting turnaround time include work load, customer alterations and equipment down time. Although every effort will be made to meet a deadline, prior planning is the best insurance. Whenever critical deadlines are a consideration, contact **publications & graphics** as soon as possible. The following list outlines time frames generally adequate for preperation of camera ready copy, remember, your job <u>may</u> require substantially more turnaround time.

One week:	Three Weeks:
business cards	booklets
envelopes	environmental impact
letterheads	statements
business forms	directories
routing slips	college course catalogs
flyers	
overheads	**Four weeks or more:**
title slides	books
display type	Montana Income Tax Book
	Montana Code Annotated
Two weeks:	House and Senate Journals
newsletters	
brochures	
pamphlets	
price lists	
calendars	

The examples of turnaround time listed above, include only typesetting and paste-up (where applicable) to produce camera ready copy. Additional time is necessary for jobs requiring camera work, printing and or binding.

Proofing Policy

When typesetting and paste-up are completed, the customer will receive a proof copy of the camera ready material. The customer is responsible for proofing of this material. The proof copy should be proofed for completeness, accuracy and form. If any errors or omissions are noted or any changes are desired, the copy should be marked up accordingly and returned to **publications & graphics**. The indicated corrections and alterations will be completed, and another camera ready proof copy will be sent to the customer. When the customer is satisfied with the proof copy, has signed the copy as "accepted" and returned the proof to **publications & graphics**, the customer is accepting responsibility for that copy and all subsequent work for which that copy is used, provided the work is done to specification.